

SEQUENCE LISTING

<110> Alnemri, Emad S.
Fernandez-Alnemri, Teresa

<120> CASPASE-14, AN APOTOTIC PROTEASE, NUCLEIC ACID ENCODING
AND METHODS OF USE

<130> 480140.434C1

<140> US 09/187,789

<141> 1998-11-06

<160> 78

<170> PatentIn Ver. 2.0

<210> 1

<211> 850

<212> DNA

<213> Mus musculus

<220>

<221> modified_base

<222> (537)

<223> Where n is Adenine, Cytosine, Guanine or Thymine

<400> 1

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atggagtcag agatgagtg tcttcagcca ttgcaggagg aaagatatga tatgtcaggt 120
gcccgcctgg ccttgacgct gtgtgtcacc aaagcccggg aggggtccga ggtagacatg 180
gaggccctgg aacgcatgtt ccgttacctg aaatttgaaa gcaccatgaa gagggatccc 240
accgcccagc aatttctgga agagttggat gaatttcagc agaccataga taattgggaa 300
gagcctgtca gctgtgcctt tgtggtagtc atggcacatg gtgaggaagg cctcctcaag 360
ggagaagatg agaagatggt cagactagaa gaccttttgg aagtcttgaa caacaagaac 420
tgcaaggccc tgagaggcaa gccaaagggt tacatcatcc aggctttag aggagagcac 480
agagaccccg gtgaggaact acgtggaaat gaggaactag gtggagatga ggaactnggt 540
ggagatgagg ttgctgtgct caagaacaac ccccaaagta tcccaaccta tacggatacc 600
ctccacatct actccacggt agaggggtac ctctcctata gacatgacga gaaaggctct 660
ggcttcatcc agaccctgac ggatgtgttc attcataaaa aaggatccat cttagaactg 720
acagaagaga tcacccgact tatggcaaac acggaggtga tgcaggaagg aaaaccaagg 780
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<210> 2

<211> 260

<212> PRT

<213> Mus musculus

<400> 2

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Glu Arg Tyr Asp Met Ser Gly Ala Arg Leu Ala Leu Thr Leu Cys Val
15                      20                      25

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Thr Lys Ala Arg Glu Gly Ser Glu Val Asp Met Glu Ala Leu Glu Arg
 30 35 40 45
 Met Phe Arg Tyr Leu Lys Phe Glu Ser Thr Met Lys Arg Asp Pro Thr
 50 55 60
 Ala Gln Gln Phe Leu Glu Glu Leu Asp Glu Phe Gln Gln Thr Ile Asp
 65 70 75
 Asn Trp Glu Glu Pro Val Ser Cys Ala Phe Val Val Leu Met Ala His
 80 85 90
 Gly Glu Glu Gly Leu Leu Lys Gly Glu Asp Glu Lys Met Val Arg Leu
 95 100 105
 Glu Asp Leu Phe Glu Val Leu Asn Asn Lys Asn Cys Lys Ala Leu Arg
 110 115 120 125
 Gly Lys Pro Lys Val Tyr Ile Ile Gln Ala Cys Arg Gly Glu His Arg
 130 135 140
 Asp Pro Gly Glu Glu Leu Arg Gly Asn Glu Glu Leu Gly Gly Asp Glu
 145 150 155
 Glu Leu Gly Gly Asp Glu Val Ala Val Leu Lys Asn Asn Pro Gln Ser
 160 165 170
 Ile Pro Thr Tyr Thr Asp Thr Leu His Ile Tyr Ser Thr Val Glu Gly
 175 180 185
 Tyr Leu Ser Tyr Arg His Asp Glu Lys Gly Ser Gly Phe Ile Gln Thr
 190 195 200 205
 Leu Thr Asp Val Phe Ile His Lys Lys Gly Ser Ile Leu Glu Leu Thr
 210 215 220
 Glu Glu Ile Thr Arg Leu Met Ala Asn Thr Glu Val Met Gln Glu Gly
 225 230 235
 Lys Pro Arg Lys Val Asn Pro Glu Val Gln Ser Thr Leu Arg Lys Lys
 240 245 250
 Leu Tyr Leu Gln
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 <213> Mus musculus
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 Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Tyr Ile Ala Tyr Arg
 165 170 175

cat gat cag aaa ggc tca tgc ttt atc cag acc ctg gtg gat gtg ttc 633
 His Asp Gln Lys Gly Ser Cys Phe Ile Gln Thr Leu Val Asp Val Phe
 180 185 190 195

acg aag agg aaa gga cat atc ttg gaa ctt ctg aca gag gtg acc cgg 681
 Thr Lys Arg Lys Gly His Ile Leu Glu Leu Leu Thr Glu Val Thr Arg
 200 205 210

cgg atg gca gaa gca gag ctg gtt caa gaa gga aaa gca agg aaa acg 729
 Arg Met Ala Glu Ala Glu Leu Val Gln Glu Gly Lys Ala Arg Lys Thr
 215 220 225

aac cct gaa atc caa agc acc ctc cgg aaa cgg ctg tat ctg cag 774
 Asn Pro Glu Ile Gln Ser Thr Leu Arg Lys Arg Leu Tyr Leu Gln
 230 235 240

tag 777

<210> 5
 <211> 242
 <212> PRT
 <213> Homo sapien

<400> 5

Met Ser Asn Pro Arg Ser Leu Glu Glu Glu Lys Tyr Asp Met Ser Gly
 1 5 10 15
 Ala Ala Leu Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser
 20 25 30
 Glu Glu Asp Leu Asp Ala Leu Glu His Met Phe Arg Gln Leu Arg Phe
 35 40 45
 Glu Ser Thr Met Lys Arg Asp Pro Thr Ala Glu Gln Phe Gln Glu Glu
 50 55 60
 Leu Glu Lys Phe Gln Gln Ala Ile Asp Ser Arg Glu Asp Pro Val Ser
 65 70 75 80
 Cys Ala Phe Val Val Leu Met Ala His Gly Arg Glu Gly Phe Leu Lys
 85 90 95
 Gly Glu Asp Gly Glu Met Val Lys Leu Glu Asn Leu Phe Glu Ala Leu
 100 105 110
 Asn Asn Lys Asn Cys Gln Ala Leu Arg Ala Lys Pro Lys Val Tyr Ile
 115 120 125
 Ile Gln Ala Cys Arg Gly Glu Gln Arg Asp Pro Gly Glu Thr Val Gly
 130 135 140
 Gly Asp Glu Ile Val Met Val Ile Lys Asp Ser Pro Gln Thr Ile Pro
 145 150 155 160
 Thr Tyr Thr Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Tyr Ile
 165 170 175
 Ala Tyr Arg His Asp Gln Lys Gly Ser Cys Phe Ile Gln Thr Leu Val
 180 185 190
 Asp Val Phe Thr Lys Arg Lys Gly His Ile Leu Glu Leu Leu Thr Glu
 195 200 205
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<222> (48) ... (737)
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Pro Arg Ser Leu Glu Glu Glu Lys Tyr Asp Met Ser Gly Ala Arg Leu
5 10 15

gcc cta ata ctg tgt gtc acc aaa gcc cgg gaa ggt tcc gaa gaa gac 152
Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser Glu Glu Asp
20 25 30 35

ctg gat gct ctg gaa cac atg ttt cgg cag ctg aga ttc gaa agc acc 200
Leu Asp Ala Leu Glu His Met Phe Arg Gln Leu Arg Phe Glu Ser Thr
40 45 50

atg aaa aga gac ccc act gcc gag caa ttc cag gaa gag ctg gaa aaa 248
Met Lys Arg Asp Pro Thr Ala Glu Gln Phe Gln Glu Glu Leu Glu Lys
55 60 65

ttc cag cag gcc atc gat tcc cgg gaa gat ccc gtc agt tgt gcc ttc 296
Phe Gln Gln Ala Ile Asp Ser Arg Glu Asp Pro Val Ser Cys Ala Phe
 70 75 80

gtg gta ctc atg gct cac ggg agg gaa ggc ttc ctc aag gga gaa gat 344
Val Val Leu Met Ala His Gly Arg Glu Gly Phe Leu Lys Gly Glu Asp
85 90 95

gag gag atg gtc aag ctg gag aat ctc ttc gag gcc ctg aac aac aag 392
Gly Glu Met Val Lys Leu Glu Asn Leu Phe Glu Ala Leu Asn Asn Lys
100 105 110 115

aac tgc cag gcc ctg cga gct aag ccc aag gtg tac atc ata cag gcc 440
Asn Cys Gln Ala Leu Arg Ala Lys Pro Lys Val Tyr Ile Ile Gln Ala
120 125 130

tgt cga gga gaa caa agg gac ccc ggt gaa aca gta ggt gga gat gag 488
 Cys Arg Gly Glu Gln Arg Asp Pro Gly Glu Thr Val Gly Gly Asp Glu
 135 140 145

att gtg atg gtc atc aaa gac agc cca caa acc atc cca aca tac aca 536
 ile Val Met Val Ile Lys Asp Ser Pro Gln Thr Ile Pro Thr Tyr Thr
 150 155 160

gat gcc ttg cac gtt tat tcc acg gta gag gga ccc acg ccc ttc cag 584
 Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Pro Thr Pro Phe Gln
 165 170 175

gat ccc ctc tac cta ccc tct gaa gct ccc ccg aac cca cct ctc tgg 632
 Asp Pro Leu Tyr Leu Pro Ser Glu Ala Pro Pro Asn Pro Pro Leu Trp
 180 185 190 195

aat tcc cag gat aca tcg cct acc gac atg atc aga aag gct cat gct 680
 Asn Ser Gln Asp Thr Ser Pro Thr Asp Met Ile Arg Lys Ala His Ala
 200 205 210

tta tcc aga ccc tgg tgg atg tgt tca cga aga gga aag gac ata tct 728
 Leu Ser Arg Pro Trp Trp Met Cys Ser Arg Arg Gly Lys Asp Ile Ser
 215 220 225

tgg aac ttc tgacagaggt gacccggcgg atggcagaag cagagctggg 777
 Trp Asn Phe
 230

tcaagaagga aaagcaagga aaacgaaccc tgaaatccaa agcaccctcc ggaaacgggt 837
 gtatctgcag tag 850

<210> 7
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 <212> PRT
 <213> Homo sapien

<400> 7

Met Ser Asn Pro Arg Ser Leu Glu Glu Glu Lys Tyr Asp Met Ser Gly
 1 5 10 15
 Ala Arg Leu Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser
 20 25 30
 Glu Glu Asp Leu Asp Ala Leu Glu His Met Phe Arg Gln Leu Arg Phe
 35 40 45
 Glu Ser Thr Met Lys Arg Asp Pro Thr Ala Glu Gln Phe Gln Glu Glu
 50 55 60
 Leu Glu Lys Phe Gln Gln Ala Ile Asp Ser Arg Glu Asp Pro Val Ser
 65 70 75 80
 Cys Ala Phe Val Val Leu Met Ala His Gly Arg Glu Gly Phe Leu Lys
 85 90 95
 Gly Glu Asp Gly Glu Met Val Lys Leu Glu Asn Leu Phe Glu Ala Leu
 100 105 110
 Asn Asn Lys Asn Cys Gln Ala Leu Arg Ala Lys Pro Lys Val Tyr Ile
 115 120 125
 Ile Gln Ala Cys Arg Gly Glu Gln Arg Asp Pro Gly Glu Thr Val Gly
 130 135 140
 Gly Asp Glu Ile Val Met Val Ile Lys Asp Ser Pro Gln Thr Ile Pro
 145 150 155 160
 Thr Tyr Thr Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Pro Thr

165 170 175
 Pro Phe Gln Asp Pro Leu Tyr Leu Pro Ser Glu Ala Pro Pro Asn Pro
 180 185 190
 Pro Leu Trp Asn Ser Gln Asp Thr Ser Pro Thr Asp Met Ile Arg Lys
 195 200 205
 Ala His Ala Leu Ser Arg Pro Trp Trp Met Cys Ser Arg Arg Gly Lys
 210 215 220
 Asp Ile Ser Trp Asn Phe
 225 230

<210> 8
 <211> 693
 <212> DNA
 <213> Homo sapien

<220>
 <221> CDS
 <222> (49)...(690)

<400> 8

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 Pro Arg Ser Leu Glu Glu Glu Lys Tyr Asp Met Ser Gly Ala Arg Leu
 5 10 15

 gcc cta ata ctg tgt gtc acc aaa gcc cgg gaa ggt tcc gaa gaa gaa 153
 Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser Glu Glu Glu
 20 25 30 35

 gag ctg gaa aaa ttc cag cag gcc atc gat tcc cgg gaa gat ccc gtc 201
 Glu Leu Glu Lys Phe Gln Gln Ala Ile Asp Ser Arg Glu Asp Pro Val
 40 45 50

 agt tgt gcc ttc gtg gta ctc atg gct cac ggg agg gaa ggc ttc ctc 249
 Ser Cys Ala Phe Val Val Leu Met Ala His Gly Arg Glu Gly Phe Leu
 55 60 65

 aag gga gaa gat ggg gag atg gtc aag ctg gag aat ctc ttc gag gcc 297
 Lys Gly Glu Asp Gly Glu Met Val Lys Leu Glu Asn Leu Phe Glu Ala
 70 75 80

 ctg aac aac aag aac tgc cag gcc ctg cga gct aag ccc aag gtg tac 345
 Leu Asn Asn Lys Asn Cys Gln Ala Leu Arg Ala Lys Pro Lys Val Tyr
 85 90 95

 atc ata cag gcc tgt cga gga gaa caa agg gac ccc ggt gaa aca gta 393
 Ile Ile Gln Ala Cys Arg Gly Glu Gln Arg Asp Pro Gly Glu Thr Val
 100 105 110 115

 ggt gga gat gag att gtg atg gtc atc aaa gac agc cca caa acc atc 441
 Gly Gly Asp Glu Ile Val Met Val Ile Lys Asp Ser Pro Gln Thr Ile
 120 125 130

cca aca tac aca gat gcc ttg cac gtt tat tcc acg gta gag gga tac 489
 Pro Thr Tyr Thr Asp Ala Leu His Val Tyr Ser Thr Val Glu Gly Tyr
 135 140 145

atc gcc tac cga cat gat cag aaa ggc tca tgc ttt atc cag acc ctg 537
 Ile Ala Tyr Arg His Asp Gln Lys Gly Ser Cys Phe Ile Gln Thr Leu
 150 155 160

gtg gat gtg ttc acg aag agg aaa gga cat atc ttg gaa ctt ctg aca 585
 Val Asp Val Phe Thr Lys Arg Lys Gly His Ile Leu Glu Leu Leu Thr
 165 170 175

gag gtg acc cgg cgg atg gca gaa gca gag ctg gtt caa gaa gga aaa 633
 Glu Val Thr Arg Arg Met Ala Glu Ala Glu Leu Val Gln Glu Gly Lys
 180 185 190 195

gca agg aaa acg aac cct gaa atc caa agc acc ctc cgg aaa cgg ctg 681
 Ala Arg Lys Thr Asn Pro Glu Ile Gln Ser Thr Leu Arg Lys Arg Leu
 200 205 210

tat ctg cag tag 693
 Tyr Leu Gln

<210> 9
 <211> 214
 <212> PRT
 <213> Homo sapien

<400> 9

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 Ala Arg Leu Ala Leu Ile Leu Cys Val Thr Lys Ala Arg Glu Gly Ser
 20 25 30
 Glu Glu Glu Glu Leu Glu Lys Phe Gln Gln Ala Ile Asp Ser Arg Glu
 35 40 45
 Asp Pro Val Ser Cys Ala Phe Val Val Leu Met Ala His Gly Arg Glu
 50 55 60
 Gly Phe Leu Lys Gly Glu Asp Gly Glu Met Val Lys Leu Glu Asn Leu
 65 70 75 80
 Phe Glu Ala Leu Asn Asn Lys Asn Cys Gln Ala Leu Arg Ala Lys Pro
 85 90 95
 Lys Val Tyr Ile Ile Gln Ala Cys Arg Gly Glu Gln Arg Asp Pro Gly
 100 105 110
 Glu Thr Val Gly Gly Asp Glu Ile Val Met Val Ile Lys Asp Ser Pro
 115 120 125
 Gln Thr Ile Pro Thr Tyr Thr Asp Ala Leu His Val Tyr Ser Thr Val
 130 135 140
 Glu Gly Tyr Ile Ala Tyr Arg His Asp Gln Lys Gly Ser Cys Phe Ile
 145 150 155 160
 Gln Thr Leu Val Asp Val Phe Thr Lys Arg Lys Gly His Ile Leu Glu
 165 170 175
 Leu Leu Thr Glu Val Thr Arg Arg Met Ala Glu Ala Glu Leu Val Gln
 180 185 190
 Glu Gly Lys Ala Arg Lys Thr Asn Pro Glu Ile Gln Ser Thr Leu Arg

Pro Ile Lys Glu Ala Asn
65 70

<210> 13
 <211> 62
 <212> PRT
 <213> Mus musculus

<400> 13
 Gly Arg Thr Arg Lys Ala Leu Ile Ile Cys Asn Thr Glu Phe Lys His
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 Leu Ser Leu Arg Tyr Gly Ala Asn Phe Asp Ile Ile Gly Met Lys Gly
 20 25 30
 Leu Leu Glu Asp Leu Gly Tyr Asp Val Val Val Lys Glu Glu Leu Thr
 35 40 45
 Ala Glu Gly Met Glu Ser Glu Met Asp Lys Phe Ala Ala Leu
 50 55 60

<210> 14
 <211> 94
 <212> PRT
 <213> Mus musculus

<400> 14
 Ser Glu His Gln Thr Ser Asp Ser Thr Phe Leu Val Leu Met Ser His
 1 5 10 15
 Gly Thr Leu His Gly Ile Cys Gly Thr Met His Ser Glu Lys Thr Pro
 20 25 30
 Asp Val Leu Gln Tyr Asp Thr Ile Tyr Gln Ile Phe Asn Asn Cys His
 35 40 45
 Cys Pro Gly Leu Arg Asp Lys Pro Lys Val Ile Ile Val Gln Ala Cys
 50 55 60
 Arg Gly Gly Asn Ser Gly Glu Met Trp Ile Arg Glu Ser Ser Lys Pro
 65 70 75 80
 Gln Leu Cys Arg Gly Val Asp Leu Pro Arg Asn Met Glu Ala
 85 90

<210> 15
 <211> 89
 <212> PRT
 <213> Mus musculus

<400> 15
 Asp Ala Val Lys Leu Ser His Val Glu Lys Asp Phe Ile Ala Phe Tyr
 1 5 10 15
 Ser Thr Thr Pro His His Leu Ser Tyr Arg Asp Lys Thr Gly Gly Ser
 20 25 30

Tyr Phe Ile Thr Arg Leu Ile Ser Cys Phe Arg Lys His Ala Cys Ser
 35 40 45

Cys His Leu Phe Asp Ile Phe Leu Lys Val Gln Gln Ser Phe Glu Lys
 50 55 60

Ala Ser Ile His Ser Gln Met Pro Thr Ile Asp Arg Ala Thr Leu Thr
 65 70 75 80

Arg Tyr Phe Tyr Leu Phe Pro Gly Asn
 85

<210> 16

<211> 172

<212> PRT

<213> Mus musculus

<400> 16

Met Ala Ala Arg Arg Thr His Glu Arg Asp Pro Ile Tyr Lys Ile Lys
 1 5 10 15

Gly Leu Ala Lys Asp Met Leu Asp Gly Val Phe Asp Asp Leu Val Glu
 20 25 30

Lys Asn Val Leu Asn Gly Asp Glu Leu Leu Lys Ile Gly Glu Ser Ala
 35 40 45

Ser Phe Ile Leu Asn Lys Ala Glu Asn Leu Val Glu Asn Phe Leu Glu
 50 55 60

Lys Thr Asp Met Ala Gly Lys Ile Phe Ala Gly His Ile Ala Asn Ser
 65 70 75 80

Gln Glu Gln Leu Ser Leu Gln Phe Ser Asn Asp Glu Asp Asp Gly Pro
 85 90 95

Gln Lys Ile Cys Thr Pro Ser Ser Pro Ser Glu Ser Lys Arg Lys Val
 100 105 110

Glu Asp Asp Glu Met Glu Val Asn Ala Gly Leu Ala His Glu Ser His
 115 120 125

Leu Met Leu Thr Ala Pro His Gly Leu Gln Ser Ser Glu Val Gln Asp
 130 135 140

Thr Leu Lys Leu Cys Pro Arg Asp Gln Phe Cys Lys Ile Lys Thr Glu
 145 150 155 160

Arg Ala Lys Glu Ile Tyr Pro Val Met Glu Lys Glu
 165 170

<210> 17

<211> 62
 <212> PRT
 <213> Mus musculus

<400> 17
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 1 5 10 15
 Leu Phe Asp Arg Asp Asn Ala Asp Thr Asp Ile Leu Asn Met Gln Glu
 20 25 30
 Leu Leu Glu Asn Leu Gly Tyr Ser Val Val Leu Lys Glu Asn Leu Thr
 35 40 45
 Ala Gln Glu Met Glu Thr Glu Leu Met Gln Phe Ala Gly Arg
 50 55 60

<210> 18
 <211> 74
 <212> PRT
 <213> Mus musculus

<400> 18
 Pro Glu His Gln Ser Ser Asp Ser Thr Phe Leu Val Phe Met Ser His
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 Gly Ile Leu Glu Gly Ile Cys Gly Val Lys His Arg Asn Lys Lys Pro
 20 25 30
 Asp Val Leu His Asp Asp Thr Ile Phe Lys Ile Phe Asn Asn Ser Asn
 35 40 45
 Cys Arg Ser Leu Arg Asn Lys Pro Lys Ile Leu Ile Met Gln Ala Cys
 50 55 60
 Arg Gly Arg Tyr Asn Gly Thr Ile Trp Val
 65 70

<210> 19
 <211> 21
 <212> PRT
 <213> Mus musculus

<400> 19
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 Leu Ser Cys Lys Trp
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<210> 20
 <211> 90

<212> PRT

<213> Mus musculus

<400> 20

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 1 5 10 15

Lys Ser Ser Thr Pro His Asn Ile Ser Trp Arg Val Gly Lys Thr Gly
 20 25 30

Ser Leu Phe Ile Ser Lys Leu Ile Asp Cys Phe Lys Lys Tyr Cys Trp
 35 40 45

Cys Tyr His Leu Glu Glu Ile Phe Arg Lys Val Gln His Ser Phe Glu
 50 55 60

Val Pro Gly Glu Leu Thr Gln Met Pro Thr Ile Glu Arg Val Ser Met
 65 70 75 80

Thr Arg Tyr Phe Tyr Leu Phe Pro Gly Asn
 85 90

<210> 21

<211> 119

<212> PRT

<213> Mus musculus

<400> 21

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Val Ser Ile Gly Thr Ile Asn Gly Leu Leu Asp Glu Leu Leu Glu Lys
 20 25 30

Arg Val Leu Asn Gln Glu Glu Met Asp Lys Ile Lys Leu Ala Asn Ile
 35 40 45

Thr Ala Met Asp Lys Ala Arg Asp Leu Cys Asp His Val Ser Lys Lys
 50 55 60

Gly Pro Gln Ala Ser Gln Ile Phe Ile Thr Tyr Ile Cys Asn Glu Asp
 65 70 75 80

Cys Tyr Leu Ala Gly Ile Leu Glu Leu Gln Ser Ala Pro Ser Ala Glu
 85 90 95

Thr Phe Val Ala Thr Glu Asp Ser Lys Gly Gly His Pro Ser Ser Ser
 100 105 110

Glu Thr Lys Glu Glu Gln Asn
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<210> 22

<211> 11
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 <213> Mus musculus

<400> 22
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<210> 23
 <211> 28
 <212> PRT
 <213> Mus musculus

<400> 23
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 1 5 10 15

Asn Pro Ser Glu Ile Tyr Pro Ile Met Asn Thr Thr
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<210> 24
 <211> 62
 <212> PRT
 <213> Mus musculus

<400> 24
 Thr Arg Thr Arg Leu Ala Leu Ile Ile Cys Asn Thr Glu Phe Gln His
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Leu Ser Pro Arg Val Gly Ala Gln Val Asp Leu Arg Glu Met Lys Leu
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Leu Leu Glu Asp Leu Gly Tyr Thr Val Lys Val Lys Glu Asn Leu Thr
 35 40 45

Ala Leu Glu Met Val Lys Glu Val Lys Glu Phe Ala Ala Cys
 50 55 60

<210> 25
 <211> 77
 <212> PRT
 <213> Mus musculus

<400> 25
 Pro Glu His Lys Thr Ser Asp Ser Thr Phe Leu Val Phe Met Ser His
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Gly Ile Gln Glu Gly Ile Cys Gly Thr Thr Tyr Ser Asn Glu Val Ser
 20 25 30

Asp Ile Leu Lys Val Asp Thr Ile Phe Gln Met Met Asn Thr Leu Lys
 35 40 45

Cys Pro Ser Leu Lys Asp Lys Pro Lys Val Ile Ile Ile Gln Ala Cys
 50 55 60

Arg Gly Glu Lys Gln Gly Val Val Leu Leu Lys Asp~Ser
 65 70 75

<210> 26
 <211> 105
 <212> PRT
 <213> Mus musculus

<400> 26
 Val Arg Asp Ser Glu Glu Asp Phe Leu Thr Asp Ala Ile Phe Glu Asp
 1 5 10 15

Asp Gly Ile Lys Lys Ala His Ile Glu Lys Asp Phe Ile Ala Phe Cys
 20 25 30

Ser Ser Thr Pro Asp Asn Val Ser Trp Arg His Pro Val Arg Gly Ser
 35 40 45

Leu Phe Ile Glu Ser Leu Ile Lys His Met Lys Glu Tyr Ala Trp Ser
 50 55 60

Cys Asp Leu Glu Asp Ile Phe Arg Lys Val Arg Phe Ser Phe Glu Gln
 65 70 75 80

Pro Glu Phe Arg Leu Gln Met Pro Thr Ala Asp Arg Val Thr Leu Thr
 85 90 95

Lys Arg Phe Tyr Leu Phe Pro Gly His
 100 105

<210> 27
 <211> 58
 <212> PRT
 <213> Mus musculus

<400> 27
 Met Glu Asn Asn Lys Thr Ser Val Asp Ser Lys Ser Ile Asn Asn Phe
 1 5 10 15

Glu Val Lys Thr Ile His Gly Ser Lys Ser Val Asp Ser Gly Ile Tyr
 20 25 30

Leu Asp Ser Ser Tyr Lys Met Asp Tyr Pro Glu Met Gly Ile Cys Ile
 35 40 45

Ile Ile Asn Asn Lys Asn Phe His Lys Ser
 50 55

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<210> 30
<211> 39
<212> PRT
<213> Mus musculus

<400> 30
Val Glu Leu Lys Lys Leu Thr Ser Phe Phe Arg Gly Asp Tyr Cys Arg
 1               5               10               15
Ser Leu Thr Gly Lys Pro Lys Leu Phe Ile Ile Gln Ala Cys Arg Gly
                20               25               30
Thr Glu Leu Asp Cys Gly Ile
          35

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<400> 31
Glu Thr Asp Ser
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<210> 32
 <211> 7
 <212> PRT
 <213> Mus musculus

<400> 32
 Thr Asp Glu Glu Met Ala Cys
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<210> 33
 <211> 42
 <212> PRT
 <213> Mus musculus

<400> 33
 Gln Lys Ile Pro Val Glu Ala Asp Phe Leu Tyr Ala Tyr Ser Thr Ala
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Pro Gly Tyr Tyr Ser Trp Arg Asn Ser Lys Asp Gly Ser Trp Phe Ile
 20 25 30

Gln Ser Leu Cys Ser Met Leu Lys Leu Tyr
 35 40

<210> 34
 <211> 51
 <212> PRT
 <213> Mus musculus

<400> 34
 Ala His Lys Leu Glu Phe Met His Ile Leu Thr Arg Val Asn Arg Lys
 1 5 10 15

Val Ala Thr Glu Phe Glu Ser Phe Ser Leu Asp Ser Thr Phe His Ala
 20 25 30

Lys Lys Gln Ile Pro Cys Ile Val Ser Met Leu Thr Lys Glu Leu Tyr
 35 40 45

Phe Tyr His
 50

<210> 35
 <211> 81
 <212> PRT
 <213> Mus musculus

<400> 35
 Met Thr Asp Asp Gln Asp Cys Ala Ala Glu Leu Glu Lys Val Asp Ser
 1 5 10 15

Ser Ser Glu Asp Gly Val Asp Ala Lys Pro Asp Arg Ser Ser Ile Ile

20 25 30
 Ser Ser Ile Leu Leu Lys Lys Lys Arg Asn Ala Ser Ala Gly Pro Val
 35 40 45
 Arg Thr Gly Arg Asp Arg Val Pro Thr Tyr Leu Tyr Arg Met Asp Phe
 50 55 60
 Gln Lys Met Gly Lys Cys Ile Ile Ile Asn Asn Lys Asn Phe Asp Lys
 65 70 75 80
 Ala

<210> 36
 <211> 47
 <212> PRT
 <213> Mus musculus

<400> 36
 Thr Gly Met Asp Val Arg Asn Gly Thr Asp Lys Asp Ala Gly Ala Leu
 1 5 10 15
 Phe Lys Cys Phe Gln Asn Leu Gly Phe Glu Val Thr Val His Asn Asp
 20 25 30
 Cys Ser Cys Ala Lys Met Gln Asp Leu Leu Arg Lys Ala Ser Glu
 35 40 45

<210> 37
 <211> 28
 <212> PRT
 <213> Mus musculus

<400> 37
 Glu Asp His Ser Asn Ser Ala Cys Phe Ala Cys Val Leu Leu Ser His
 1 5 10 15
 Gly Glu Glu Asp Leu Ile Tyr Gly Lys Asp Gly Val
 20 25

<210> 38
 <211> 39
 <212> PRT
 <213> Mus musculus

<400> 38
 Thr Pro Ile Lys Asp Leu Thr Ala His Phe Arg Gly Asp Arg Cys Lys
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 Thr Leu Leu Glu Lys Pro Lys Leu Phe Phe Ile Gln Ala Cys Arg Gly
 20 25 30

Thr Glu Leu Asp Asp Gly Ile
35

<210> 39
<211> 4
<212> PRT
<213> Mus musculus

<400> 39
Gln Ala Asp Ser
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<210> 40
<211> 52
<212> PRT
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<400> 40
Pro Ile Asn Asp Ile Asp Ala Asn Pro Arg Asn Lys Ile Pro Val Glu
1 5 10 15
Ala Asp Phe Leu Phe Ala Tyr Ser Thr Val Pro Gly Tyr Tyr Ser Trp
20 25 30
Arg Asn Pro Gly Lys Gly Ser Trp Phe Val Gln Ala Leu Cys Ser Ile
35 40 45

Leu Asn Glu His
50

<210> 41
<211> 51
<212> PRT
<213> Mus musculus

<400> 41
Gly Lys Asp Leu Glu Ile Met Gln Ile Leu Thr Arg Val Asn Asp Arg
1 5 10 15
Val Ala Arg His Phe Glu Ser Gln Ser Asp Asp Pro Arg Phe Asn Glu
20 25 30
Lys Lys Gln Ile Pro Cys Met Val Ser Met Leu Thr Lys Glu Leu Tyr
35 40 45

Phe Ser Arg
50

<210> 42
<211> 41

<212> PRT
 <213> Mus musculus

<400> 42
 Met Thr Glu Thr Asp Gly Phe Tyr Lys Ser Arg Glu Val Phe Asp Pro
 1 5 10 15
 Ala Glu Gln Tyr Lys Met Asp His Lys Arg Arg Gly Val Ala Leu Ile
 20 25 30
 Phe Asn His Glu Arg Phe Phe Trp His
 35 40

<210> 43
 <211> 47
 <212> PRT
 <213> Mus musculus

<400> 43
 Leu Thr Leu Pro Glu Arg Arg Gly Thr Asn Ala Asp Arg Asp Asn Leu
 1 5 10 15
 Thr Arg Arg Phe Ser Asp Leu Gly Phe Glu Val Lys Cys Phe Asn Asp
 20 25 30
 Leu Arg Ala Glu Glu Leu Leu Leu Lys Ile His Glu Val Ser Thr
 35 40 45

<210> 44
 <211> 28
 <212> PRT
 <213> Mus musculus

<400> 44
 Ser Ser His Ile Asp Ala Asp Cys Phe Ile Cys Val Phe Leu Ser His
 1 5 10 15
 Gly Glu Gly Asn His Val Tyr Ala Tyr Asp Ala Lys
 20 25

<210> 45
 <211> 51
 <212> PRT
 <213> Mus musculus

<400> 45
 Ile Glu Ile Gln Thr Leu Thr Gly Leu Phe Lys Gly Asp Lys Cys Gln
 1 5 10 15
 Ser Leu Val Gly Lys Pro Lys Ile Phe Ile Ile Gln Ala Cys Arg Gly
 20 25 30

Ser Gln His Asp Val Pro Val Val Pro Leu Asp Met Val Asp His Gln
 35 40 45

Thr Asp Lys
 50

<210> 46
 <211> 52
 <212> PRT
 <213> Mus musculus

<400> 46
 Asn Val Thr Gln Val Asp Ala Ala Ser Val Tyr Thr Leu Pro Ala Gly
 1 5 10 15

Ala Asp Phe Leu Met Cys Tyr Ser Val Ala Glu Gly Tyr Tyr Ser His
 20 25 30

Arg Glu Thr Val Asn Gly Ser Trp Tyr Ile Gln Asp Leu Cys Glu Met
 35 40 45

Leu Ala Arg Tyr
 50

<210> 47
 <211> 55
 <212> PRT
 <213> Mus musculus

<400> 47
 Gly Ser Ser Leu Glu Phe Thr Glu Leu Leu Thr Leu Val Asn Arg Lys
 1 5 10 15

Val Ser Gln Arg Arg Val Asp Phe Cys Lys Asp Pro Asp Ala Ile Gly
 20 25 30

Lys Lys Gln Val Pro Cys Phe Ala Ser Met Leu Thr Lys Lys Leu His
 35 40 45

Phe Cys Pro Lys Pro Ser Lys
 50 55

<210> 48
 <211> 250
 <212> PRT
 <213> Mus musculus

<400> 48
 Met Asp Phe Gln Ser Cys Leu Asp Ala Ile Ala Glu Glu Leu Gly Ser
 1 5 10 15

Glu Asp Leu Ala Ala Leu Lys Phe Leu Cys Leu Asp Tyr Ile Pro His

20										25										30																																			
Lys	Lys	Leu	Glu	Thr	Ile	Glu	Asp	Ala	Gln	Lys	Leu	Phe	Leu	Arg	Leu																																								
		35						40							45																																								
Arg	Glu	Lys	Gly	Met	Leu	Glu	Glu	Gly	Asn	Leu	Ser	Phe	Leu	Lys	Glu																																								
		50				55					60																																												
Leu	Leu	Phe	His	Ile	Ser	Arg	Trp	Asp	Leu	Leu	Val	Asn	Phe	Leu	Asp																																								
		65			70					75					80																																								
Cys	Asn	Arg	Glu	Glu	Met	Val	Arg	Glu	Leu	Arg	Asp	Pro	Arg	Gln	Cys																																								
				85					90					95																																									
Pro	Arg	Phe	Leu	Pro	Tyr	Arg	Ser	Cys	Ser	Phe	Arg	Leu	Ser	Glu	Glu																																								
			100					105					110																																										
Val	Ser	Glu	Leu	Glu	Leu	Arg	Ser	Phe	Lys	Phe	Leu	Leu	Asn	Asn	Glu																																								
		115				120						125																																											
Ile	Pro	Lys	Cys	Lys	Leu	Glu	Asp	Asp	Leu	Ser	Leu	Leu	Glu	Ile	Phe																																								
		130				135					140																																												
Val	Glu	Met	Glu	Lys	Arg	Thr	Met	Leu	Ala	Glu	Asn	Asn	Leu	Glu	Thr																																								
		145			150				155					160																																									
Leu	Lys	Ser	Ile	Cys	Asp	Gln	Val	Asn	Lys	Ser	Leu	Leu	Gly	Lys	Ile																																								
				165				170					175																																										
Glu	Asp	Tyr	Glu	Arg	Ser	Ser	Thr	Glu	Arg	Arg	Met	Ser	Leu	Glu	Gly																																								
			180					185				190																																											
Arg	Glu	Glu	Leu	Pro	Pro	Ser	Val	Leu	Asp	Glu	Met	Ser	Leu	Lys	Met																																								
		195				200					205																																												
Ala	Glu	Leu	Cys	Asp	Ser	Pro	Arg	Glu	Gln	Asp	Ser	Glu	Ser	Arg	Thr																																								
		210				215				220																																													
Ser	Asp	Lys	Val	Tyr	Gln	Met	Lys	Asn	Lys	Pro	Arg	Gly	Tyr	Cys	Leu																																								
		225			230				235					240																																									
Ile	Ile	Asn	Asn	His	Asp	Phe	Ser	Lys	Ala																																														
				245				250																																															

<210> 49

<211> 54

<212> PRT

<213> Mus musculus

<400> 49

Arg	Glu	Asp	Ile	Thr	Gln	Leu	Arg	Lys	Met	Lys	Asp	Arg	Lys	Gly	Thr				
	1				5				10					15					

Asp	Cys	Asp	Lys	Glu	Ala	Leu	Ser	Lys	Thr	Phe	Lys	Glu	Leu	His	Phe				
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--	--

20 25 30
 Glu Ile Val Ser Tyr Asp Asp Cys Thr Ala Asn Glu Ile His Glu Ile
 35 40 45

Leu Glu Gly Tyr Gln Ser
 50

<210> 50
 <211> 28
 <212> PRT
 <213> Mus musculus

<400> 50
 Ala Asp His Lys Asn Lys Asp Cys Phe Ile Cys Cys Ile Leu Ser His
 1 5 10 15

Gly Asp Lys Gly Val Val Tyr Gly Thr Asp Gly Lys
 20 25

<210> 51
 <211> 52
 <212> PRT
 <213> Mus musculus

<400> 51
 Glu Ala Ser Ile Tyr Asp Leu Thr Ser Tyr Phe Thr Gly Ser Lys Cys
 1 5 10 15

Pro Ser Leu Ser Gly Lys Pro Lys Ile Phe Phe Ile Gln Ala Cys Arg
 20 25 30

Gly Ser Asn Phe Gln Lys Gly Val Pro Asp Glu Ala Gly Phe Glu Gln
 35 40 45

Gln Asn His Thr
 50

<210> 52
 <211> 47
 <212> PRT
 <213> Mus musculus

<400> 52
 Ser Ser His Lys Asn Tyr Ile Pro Asp Glu Ala Asp Phe Leu Leu Gly
 1 5 10 15

Met Ala Thr Val Leu Met Cys Val Ser Tyr Arg Asp Pro Val Asn Gly
 20 25 30

Thr Trp Tyr Ile Gln Ser Leu Cys Gln Ser Leu Arg Glu Arg Cys
 35 40 45

<210> 53
 <211> 19
 <212> PRT
 <213> Mus musculus

<400> 53
 Pro Gln Gly Asp Asp Ile Leu Ser Ile Leu Thr Gly Val Asn Tyr Asp
 1 5 10 15

Val Ser Asn

<210> 54
 <211> 22
 <212> PRT
 <213> Mus musculus

<400> 54
 Lys Asp Asp Arg Arg Asn Lys Gly Lys Gln Met Pro Gln Pro Thr Phe
 1 5 10 15

Thr Leu Arg Lys Lys Leu
 20

<210> 55
 <211> 260
 <212> PRT
 <213> Mus musculus

<400> 55
 Met Ala Ala Pro Ser Gly Arg Ser Gln Ser Ser Leu His Arg Lys Gly
 1 5 10 15

Leu Met Ala Ala Asp Arg Arg Ser Arg Ile Leu Ala Val Cys Gly Met
 20 25 30

His Pro Asp His Gln Glu Thr Leu Lys Lys Asn Arg Val Val Leu Ala
 35 40 45

Lys Gln Leu Leu Leu Ser Glu Leu Leu Glu His Leu Leu Glu Lys Asp
 50 55 60

Ile Ile Thr Leu Glu Met Arg Glu Leu Ile Gln Ala Lys Gly Gly Ser
 65 70 75 80

Phe Ser Gln Asn Val Glu Leu Leu Asn Leu Leu Pro Lys Arg Gly Pro
 85 90 95

Gln Ala Phe Asp Ala Phe Cys Glu Ala Leu Arg Glu Thr Arg Gln Gly
 100 105 110

His Leu Glu Asp Leu Leu Leu Thr Thr Leu Ser Asp Ile Gln His Val
115 120 125

Leu Pro Pro Leu Ser Cys Asp Tyr Asp Thr Ser Leu Pro Phe Ser Val
130 135 140

Cys Glu Ser Cys Pro Pro His Lys Gln Leu Arg Leu Ser Thr Asp Ala
145 150 155 160

Thr Glu His Ser Leu Asp Asn Gly Asp Gly Pro Pro Cys Leu Leu Val
165 170 175

Lys Pro Cys Thr Pro Glu Phe Tyr Gln Ala His Tyr Gln Leu Ala Tyr
180 185 190

Arg Leu Gln Ser Gln Pro Arg Gly Leu Ala Leu Val Leu Ser Asn Val
195 200 205

His Phe Thr Gly Glu Lys Asp Leu Glu Phe Arg Ser Gly Gly Asp Val
210 215 220

Asp His Thr Thr Leu Val Thr Leu Phe Lys Leu Leu Gly Tyr Asn Val
225 230 235 240

His Val Leu His Asp Gln Thr Ala Gln Glu Met Gln Glu Lys Leu Gln
245 250 255

Asn Phe Ala Gln
260

<210> 56
<211> 11
<212> PRT
<213> Mus musculus

<400> 56
Leu Pro Ala His Arg Val Thr Asp Ser Val Cys
1 5 10

<210> 57
<211> 18
<212> PRT
<213> Mus musculus

<400> 57
Val Ala Leu Leu Ser His Gly Val Glu Gly Gly Ile Tyr Gly Val Asp
1 5 10 15

Gly Lys

<210> 58

<211> 56
 <212> PRT
 <213> Mus musculus

<400> 58
 Leu Leu Gln Leu Gln Glu Val Phe Arg Leu Phe Asp Asn Ala Asn Cys
 1 5 10 15
 Pro Ser Leu Gln Asn Lys Pro Lys Met Phe Phe Ile Gln Ala Cys Arg
 20 25 30
 Gly Asp Glu Thr Asp Arg Gly Val Asp Gln Gln Asp Gly Lys Asn His
 35 40 45
 Thr Gln Ser Pro Gly Cys Glu Glu
 50 55

<210> 59
 <211> 53
 <212> PRT
 <213> Mus musculus

<400> 59
 Ser Asp Ala Gly Lys Glu Glu Leu Met Lys Met Arg Leu Pro Thr Arg
 1 5 10 15
 Ser Asp Met Ile Cys Gly Tyr Ala Cys Leu Lys Gly Asn Ala Ala Met
 20 25 30
 Arg Asn Thr Lys Arg Gly Ser Trp Tyr Ile Glu Ala Leu Thr Gln Val
 35 40 45
 Phe Ser Glu Arg Ala
 50

<210> 60
 <211> 18
 <212> PRT
 <213> Mus musculus

<400> 60
 Asp Met His Val Ala Asp Met Leu Val Lys Val Asn Ala Leu Ile Lys
 1 5 10 15
 Glu Arg

<210> 61
 <211> 35
 <212> PRT
 <213> Mus musculus

<400> 61

Glu Gly Tyr Ala Pro Gly Thr Glu Phe His Arg Cys Lys Glu Met Ser
 1 5 10 15

Glu Tyr Cys Ser Thr Leu Cys Gln Gln Leu Tyr Leu Phe Pro Gly Tyr
 20 25 30

Pro Pro Thr
 35

<210> 62

<211> 31

<212> PRT

<213> Mus musculus

<400> 62

Met Glu Ser Glu Met Ser Asp Pro Gln Pro Leu Gln Glu Glu Arg Tyr
 1 5 10 15

Asp Met Ser Gly Ala Arg Leu Ala Leu Thr Leu Cys Val Thr Lys
 20 25 30

<210> 63

<211> 74

<212> PRT

<213> Mus musculus

<400> 63

Ala Arg Glu Gly Ser Glu Val Asp Met Glu Ala Leu Glu Arg Met Phe
 1 5 10 15

Arg Tyr Leu Lys Phe Glu Ser Thr Met Lys Arg Asp Pro Thr Ala Gln
 20 25 30

Gln Phe Leu Glu Glu Leu Asp Glu Phe Gln Gln Thr Ile Asp Asn Trp
 35 40 45

Glu Glu Pro Val Ser Cys Ala Phe Val Val Leu Met Ala His Gly Glu
 50 55 60

Glu Gly Leu Leu Lys Gly Glu Asp Glu Lys
 65 70

<210> 64

<211> 56

<212> PRT

<213> Mus musculus

<400> 64

Met Val Arg Leu Glu Asp Leu Phe Glu Val Leu Asn Asn Lys Asn Cys
 1 5 10 15

Lys Ala Leu Arg Gly Lys Pro Lys Val Tyr Ile Ile Gln Ala Cys Arg
 20 25 30

Gly Glu His Arg Asp Pro Gly Glu Glu Leu Arg Gly Asn Glu Glu Leu
 35 40 45

Gly Gly Asp Glu Glu Leu Gly Gly
 50 55

<210> 65
 <211> 53
 <212> PRT
 <213> Mus musculus

<400> 65
 Asp Glu Val Ala Val Leu Lys Asn Asn Pro Gln Ser Ile Pro Thr Tyr
 1 5 10 15

Thr Asp Thr Leu His Ile Tyr Ser Thr Val Glu Gly Tyr Leu Ser Tyr
 20 25 30

Arg His Asp Glu Lys Gly Ser Gly Phe Ile Gln Thr Leu Thr Asp Val
 35 40 45

Phe Ile His Lys Lys
 50

<210> 66
 <211> 15
 <212> PRT
 <213> Mus musculus

<400> 66
 Ile Leu Glu Leu Thr Glu Glu Ile Thr Arg Leu Met Ala Asn Thr
 1 5 10 15

<210> 67
 <211> 8
 <212> PRT
 <213> Mus musculus

<400> 67
 Glu Val Met Gln Glu Gly Lys Pro
 1 5

<210> 68
 <211> 17
 <212> PRT
 <213> Mus musculus

<400> 68

Arg Lys Val Asn Pro Glu Val Gln Ser Thr Leu Arg Lys Lys Leu Tyr
 1 5 10 15

Gln

<210> 69
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer derived from mouse caspase-14 cDNA

<400> 69
 atatgatatg tcaggtgccc g 21

<210> 70
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer derived from mouse caspase-14 cDNA

<400> 70
 ttccggaggg tgctttgga 19

<210> 71
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer derived from human caspase-14 cDNA

<400> 71
 cctgtatgat gtacaccttg g 21

<210> 72
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer derived from human caspase-14 cDNA

<400> 72
 agagattctc cagcttgac 19

<210> 73
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Primer derived from human caspase-14 cDNA

<400> 73

atcttctccc ttgaggaag

19

<210> 74

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer derived from human caspase-14 cDNA

<400> 74

atatgatatg tcaggtgccc g

21

<210> 75

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer derived from human caspase-14 cDNA

<400> 75

caaggtgtac atcatacagg

20

<210> 76

<211> 850

<212> DNA

<213> Mus musculus

<220>

<221> modified_base

<222> (537)

<223> Where n is Adenine, Cytosine, Guanine or Thymidine

<400> 76

gtgcgcaggc ggggtgcgcag gccactctgt ctccggtttg tttccacgac tttcgggtctg 60
 tacctcagtc tctactcact aggagtcggt aacgtcctcc tttctatact atacagtcca 120
 cgggcggacc gggactgcga cacacagtgg tttcgggccc tcccaaggct ccatctgtac 180
 ctccgggacc ttgcgtacaa ggcaatggac tttaaacttt cgtgggtactt ctccctaggg 240
 tggcgggtcg ttaaagacct tctcaacctt cttaaagtcg tctgggtatct attaacctt 300
 ctccggacagt cgacacggaa acaccatgag taccgtgtac cactccttcc ggaggagtcc 360
 cctcttctac tcttctacca gtctgatctt ctggaaaaac ttcagaactt gttgttcttg 420
 acgttccggg actctccgtt cggtttccac atgtagtagg tccgaacatc tcctctcgtg 480
 tctctggggc cactccttga tgcaccttta ctcttgatc cacctctact ccttgancca 540
 cctctactcc aacgacacga gttcttggtg ggggtttcat aggggttgat atgcctatgg 600
 gaggtgtaga tgaggtgcca tctcccatg gagaggatat ctgtactgct ctttccgaga 660
 ccgaagtagg tctgggactg cctacacaag taagtatttt ttcctaggta gaatcttgac 720
 tgtcttctct agtgggctga ataccgtttg tgcctccact acgtccttcc ttttggttcc 780
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 cccgtcccta 850

<210> 77

<400> 77
His Ala Ser Ala His Ala Ser Gly Glu Thr Glu Ala Lys Gln Arg Cys
1 5 10 15

<400> 78
Lys Arg Gly Gln Gly
1 5